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ABSTRACT

High numbers of repeat abortions at a medical school clinic prompted clinic personnel to develop an experimental fertility control counseling program. Counseling objectives included the following: (1) to engender rapport and trust; (2) to assess the patient's past contraceptive use and psychosocial history; (3) to improve patient's knowledge of reproduction and contraception; (4) to sharpen decision-making skills; and (5) to discuss any anxiety linked to pregnancy prevention. Subjects (N=200) were Medicaid-paid patients requesting elective pregnancy termination at a New Jersey hospital. Three pirs of counselors who themselves had undergone voluntary abortions were educated in reproductive anatomy, abortion, and contraceptive information and were supervised by an experienced social worker. For control subjects, data were collected at intake and at post-abortion visits. Experimental subjects received identical hospital services but also had five counseling sessions. Counseling sessions dealt with patient's psychosocial situation, abortion decision, contraceptive education, life outlook, relational situation, and contraceptive intentions. Attempts were made to contact subjects about contraceptive use 3 weeks after their procedures and every 3 months thereafter until 15 months post-abortion. Pregnancy rates were found to be high for contacted subjects. Experimental subjects were no more likely to use effective methods than were control subjects. Immediately after abortion, both groups showed increased contraceptive use. One year later, experimental subjects' compliance fell below that of control subjects. Data suggest that subjects move inexorably to using no contraception. No statistical difference in pregnancy rates between groups was shown. Abortion apparently was used as birth control; further research into effective interventions is needed. (ABL)

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IMPACT OF COUNSELING ON REPEATED UNPLANNED PREGNANCY AND CONTRACEPTIVE BEHAVIOR IN LOW SES ABORTION POPULATION

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INTRODUCTION

Our concern with the high numbers of repeat abortions occurring at the Middlesex General-University Hospital led the investigators to design a series of counseling interventions that we hoped would improve the use of contraception and reduce the incidence of (unwanted) pregnancies in our patient population. This paper will describe the nature of the study, its results and how it compares with other attempts to reduce the numbers of repeated unwanted pregnancies.

The UMDNJ - Rutgers Medical School Department of Obstetrics and Gynecology performs well over 300 "service" (Medicaid-paid) pregnancy termination procedures annually, nearly half of which are repeat procedures. Although contraceptives are readily available at the clinic, hospital personnel reasoned that these patients' needs had not been met. Staff believed they needed personalized, in-depth counseling about fertility control in order to change their behavior.

There have been many calls to educate the high-risk population and to increase access to contraceptives, as a means to prevent contraceptive failure and repeated unintended pregnancy. Dryfoos[1] summarizes this call: "It seems reasonable to assume that most of them [high risk population] would use more effective methods if they knew about them or if they could obtain them without too much difficulty." Conventional wisdom and several papers[2,3,4,5,6,7,8,9,10] have assumed that adequate counseling, or "educational counseling enhances contraceptive use and consequently would reduce the rate of unintended pregnancy.

The current authors sought to devise a counseling intervention that would go beyond the routine offer of a contraceptive pre- and post-abortion. We believed that even contraceptive education, which is sometimes termed "informational counseling," would be inadequate if it was not integrated with the psychosocial dimension for each individual.

Counseling objectives for the experimental intervention were: (1) to engender rapport and trust; (2) to assess the patient's past contraceptive use and psychosocial history; (3) to improve her knowledge of reproduction and contraception; (4) to sharpen decision-making skills, first regarding abortion if necessary, and then regarding contraception; (5) to discuss any anxiety linked to pregnancy prevention. The overarching objective was to assist every patient in realising her family-planning goals by increasing her own self-awareness regarding her life choices.

MATERIALS AND METHODS

Subjects were service patients requesting elective pregnancy termination at Middlesex General-University Hospital, New Brunswick, between June 1983 and March 1985. Two hundred and ninety-two patients were solicited. The consenting 200 participants were randomly assigned to either the control or the experimental condition.

Three pairs of counselors, ranging in age from 22 to 32 years of age, were used in succession, over the course of the study. The counselors had all had some peer counseling experience and had themselves undergone voluntary abortion. They were specifically educated in reproductive anatomy, abortion and contraceptive information and were directly supervised by an experienced social

worker.

The investigators had three working hypotheses concerning a multi-contact peer counseling intervention: (1) it would increase the likelihood of patients using the more effective methods of contraception (pill or IUD); (2) increase the reported duration of consistent contraceptive use after abortion; and (3) lower the rate of unintended pregnancy subsequent to abortion.

The counseling approach was based on a wide variety of research findings. We heeded the research with teenagers supporting the assertion that nonjudgmental information-sharing and increased access to contraceptives improves contraceptive behavior;[10,11,12,13] that "action-oriented" counseling has been shown to be successful;[14] that female physiology and pregnancy risk, not merely instructions on methods, should be included in contraceptive education;[2] and that peer counseling may be especially effective.[12]

Many social and psychological factors have been identified as contributing to contraceptive use failure in repeat abortors, ranging from motivational problems -- including denial, guilt, game-playing, and fear[15] to perceived inability to control events[16], or a semiconscious wish to become pregnant.[17,18] Counselors were made aware of these possibilities and explored these issues, as appropriate, with the index patients.

For control subjects, data was collected and a "Level of Knowledge" questionnaire administered at intake. (Results of this test, as well as other data, will be presented in future papers.) The control subjects were also seen briefly on the day of their abortion procedure. At the two-week follow-up medical examination, a repeated measure of the test and some additional data was

obtained. Forms were mailed and calls made to those who did not return for the post-op exam. The model thus called for three brief contacts with the control subjects, for data collection purposes. (Although no counseling was extended to these subjects, the Rutgers Medical School and MG-UH protocol for all abortion patients calls for residents to address contraception as needed during the pre-abortion history and physical examination, during a brief post-operative visit to discharge the patient from the hospital, and at the two-week follow-up exam.)

Experimental subjects received identical hospital services, as residents, attending physicians and hospital staff were blind to subject condition. In addition, these subjects had five counseling sessions. This research project took advantage of the extended time periods hospital abortions often entail. At MG-UH, there is a financial interview [first visit), a medical exam and paperwork [second visit] before hospital admission [third visit].

(1) At intake, experimental subjects were individually counseled for an average of 45 minutes concerning their psychosocial situation and abortion decision. The patient's current living arrangements, the nature of her relationship with her partner, cognitive and emotional aspects of the abortion decision, previous exposure to the idea of pregnancy planning and related material was discussed.

(2) Before her pre-admission physical exam, each subject had a private contraceptive education session which lasted approximately one hour. These sessions were individualized, based on responses on the Level of Knowledge questionnaire administered the day before. After this session, the counselor remained free for advocacy, or support, during the physical exam.

(3) Counselors saw subjects for supportive counseling during their hospital stay.

(4) One week following the procedure, counselors contacted experimental subjects to remind them of their aftercare appointment, and to discuss further any personal concerns or difficulties.

(5) At the follow-up appointment, each experimental subject was seen for an hour-long counseling session concerning her life outlook, relational situation, feelings and plans and contraceptive intentions. Thereafter, experimental subjects and controls were both contacted every three months for data collection. To reduce the chance of bias, up to three letters could be sent to an experimental as well as a control subject for any given checkpoint.

We asked subjects three weeks after their procedures and every three months thereafter, which method of pregnancy prevention they were using. We offered opportunities for them to communicate that they were conscious of contraception in their lives, and did not hesitate to prompt them by supplying possible responses such as "withdrawal" and "sometimes not having sex".

RESULTS

As Figure 1 shows, 95 percent of our subjects were unmarried; 81 percent were nonwhite. Most importantly, 97 percent of our study subjects were Medicaid recipients. Another interesting finding was that 25 percent of our subjects had no telephone at enrollment and an additional 17 percent had phone service only intermittently.

The Subject Population

Figure 1

Characteristics of Women Obtaining Abortions

CHARACTERISTICS	PERCENT OF ALL U.S. WOMEN[14]	PERCENT OF SUBJECTS (N = 200)
Age		
15	1%	3%
15-19	29%	34% (33% are age 18-19)
20	70%	19%
Race		
White	70%	19%
Nonwhite	30%	81%
Marital Status		
Married	21%	5%
Unmarried	79%	95%
Prior Abortion		
None	67%	52%
One or More	33%	48%
Medicaid Recipients	13%	97%

Subsequent Pregnancy

At the end of data collection, there were 34 subsequent pregnancies. Difficulty in follow-up contact meant that the numbers of subjects followed at each checkpoint varied. The sample number shifted from one checkpoint to the next. The denominators in Figure 2 show the N for each checkpoint, but the total N is not known. Figure 3 presents the information graphically.

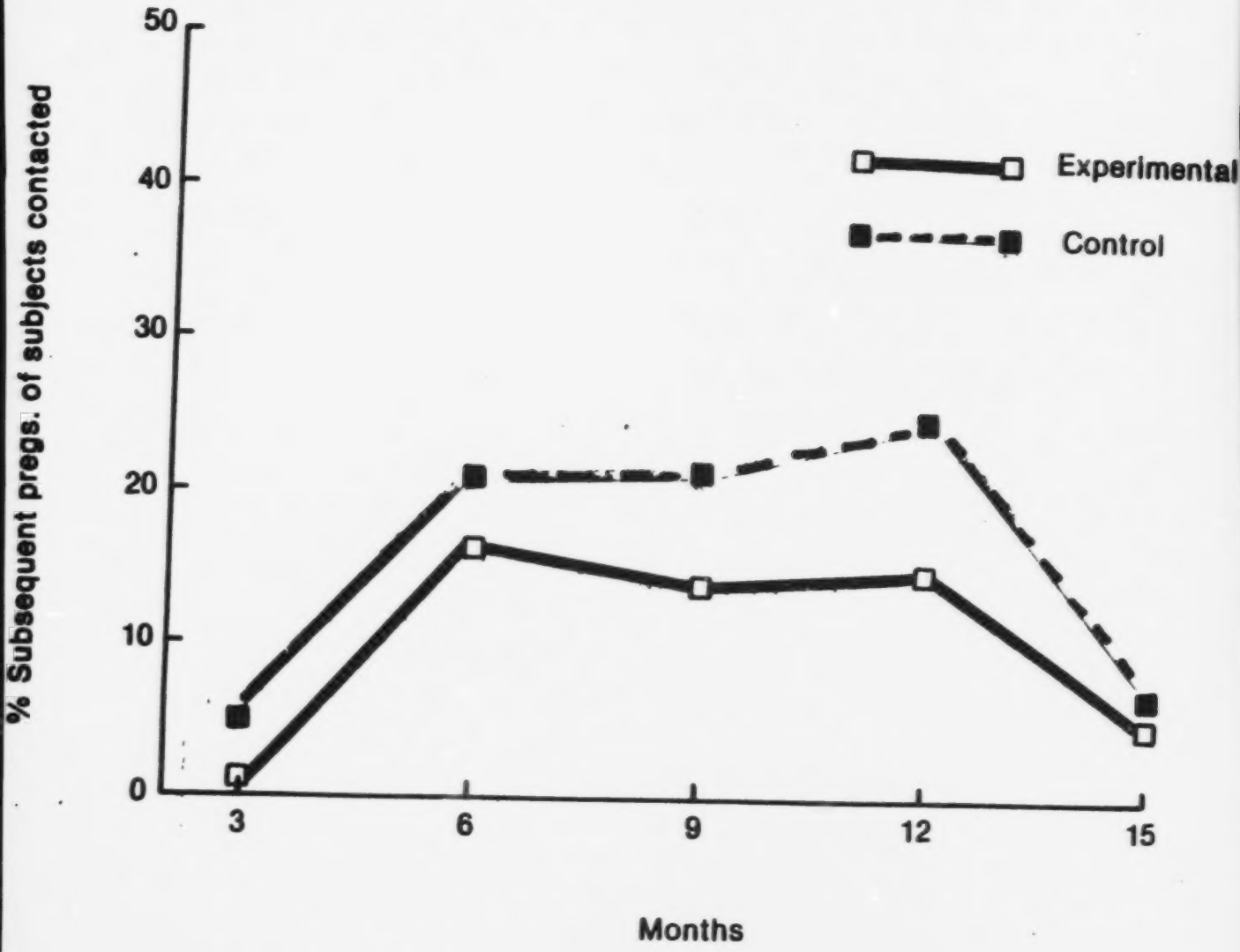
FIGURE 2

SUBSEQUENT PREGNANCIES OF CONTACTED SUBJECTS

Month of Contact	No. Subjects Data Collected	No. Exper. Ss Pregnant	No. Control Ss Pregnant	Total # Pregs.	Cum. # Pregs.
3-month	85	1/48 2%	2/37 5%	3	3
6-month	65	6/37 16%	6/28 21%	12	15
9-month	52	4/29 14%	5/23 22%	9	24
12-month	42	4/26 15%	4/16 25%	8	32
15-month	35	1/21 5%	1/14 7%	2	34

The denominator = number of subjects contacted in this group.

FIGURE 3


50
40
30
20
10
0
% Subsequent pregs. of subjects contacted
Experimental
Control
3
6
9
12
15
Months

Although at each checkpoint a higher proportion of control subjects than experimentals reported a pregnancy, at no point was the differential statistically significant.*

FIGURE 3

*Fisher's Exact Test (1-tailed) at 3 months = .4023; at 6 months = .423; at 9 months = .3486; at 12 months = .3514; at 15 months = .6471

All subjects reported that their pregnancies were unplanned and unintended. However, ten patients -- 43 percent of pregnant experimentals and 24 percent of pregnant controls -- carried to term. Pregnancy outcome information was unavailable on one control and two experimental subjects who reported a subsequent pregnancy.

CONTRACEPTIVE COMPLIANCE

Twenty-nine percent of all subjects reported using "some form of birth control" during the month of conception. This explicitly included occasional use of condoms or foam and any attempt to schedule abstention.

When they were asked, at intake, whether they planned to use any birth control method after the abortion, ninety-five percent of all subjects named a specific contraceptive method. There was no statistical difference between the 58 percent of experimentals and 65 percent of control subjects who actually started pills at or before their two-week post-abortion checkup (p=.27168). At the first 3-month checkpoint, four out of 48 contacted experimentals (8%) and one of 37 control subjects (3%) had had IUDs inserted. This was also not significant (p=.19166). Five women had begun using diaphragms by the three-month checkpoint. All of these were experimental subjects. This was significant (p=.0269). Four of these women became pregnant during the study.

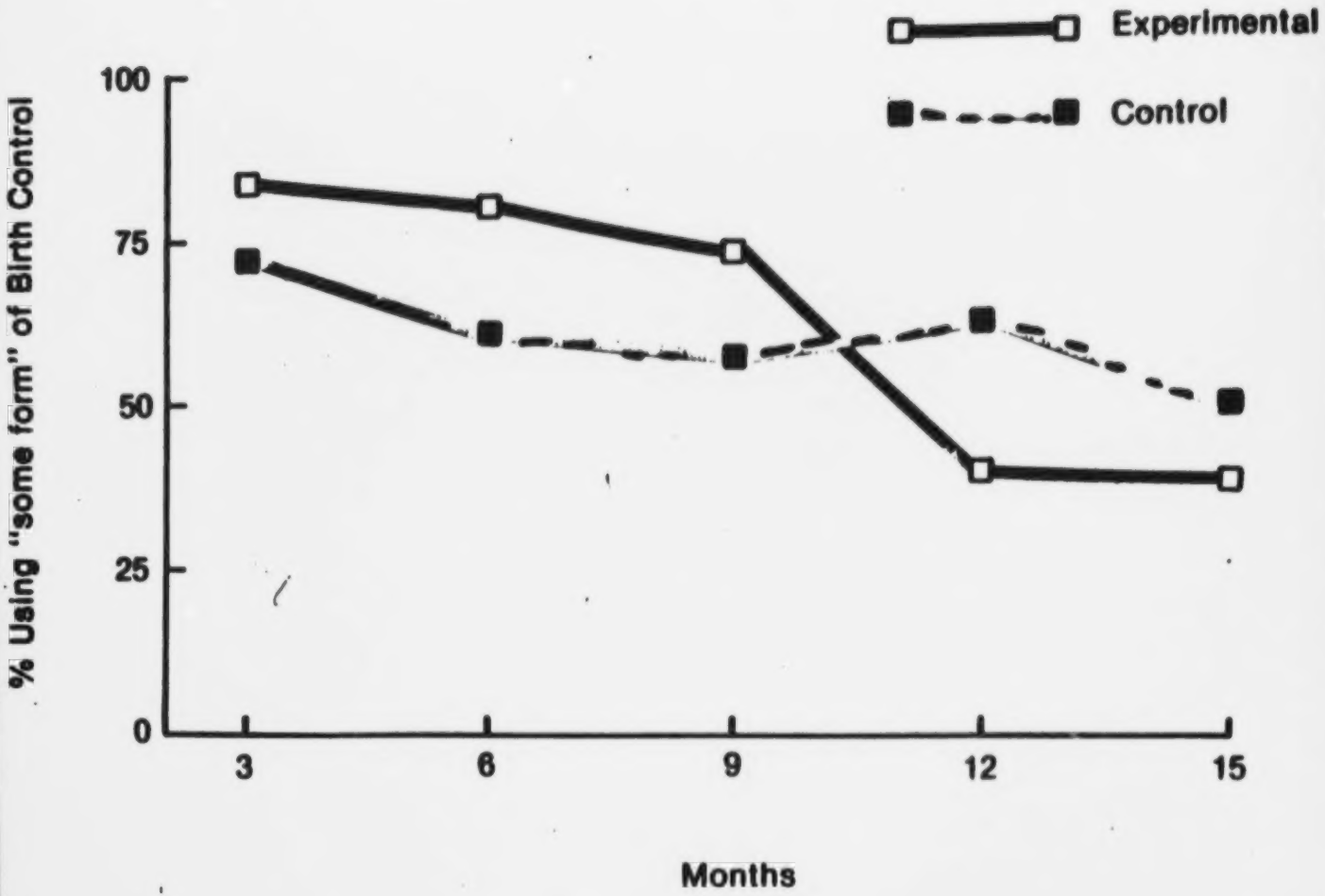
Data was compiled to compare the two groups on the broadest possible measure: of those we could contact at each interval, what proportion were using "any form of birth control," including condoms, foam, withdrawal, rhythm (by any understanding of that term) or abstinence.

For the first nine months, slightly more experimentals were using "some form of birth control." However, at 12 and 15 months, the experimentals'

contraceptive use fell markedly below that of control subjects.

FIGURE 4

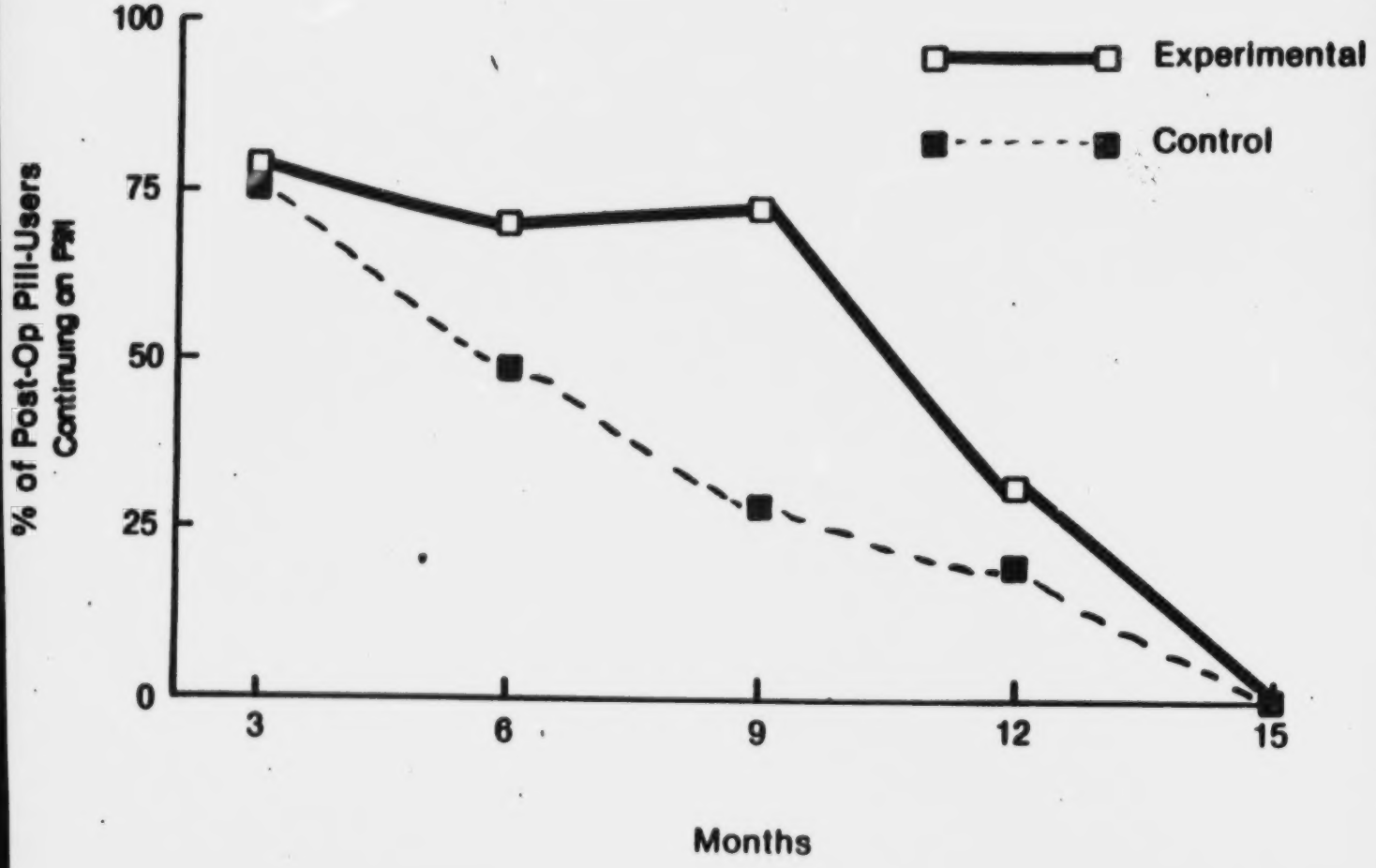
FIGURE 4


Experimental
Control
100
75
50
25
0
% Using "some form" of Birth Control
3
6
9
12
15
Months

Since pills were the most common choice of contraceptive reported by post-abortion contraceptors, and since this is the most effective of the reversible methods currently available, it seems crucial to ask whether experimental subjects had a higher probability of continuing to take pills over time than did the controls.

FIGURE 5

FIGURE 5


100
75
50
25
0
% of Post-Op Pill-Users Continuing on Pill
3
6
9
12
15
Months
Experimental
Control

At each checkpoint up to 15 months, there was no statistically significant difference between groups in their persistence in continuing pill use.* Moreover, by 15 months, none of the subjects who started pills post-abortion was still taking them, regardless of group.

The subjects who reported discontinuing their pills by 15 months were not composed disproportionately of control subjects. Eight out of 13 experimental subjects contacted at 12 months stopped contracepting altogether; 7 out of 12 controls reported this behavior. The two groups are almost identical on this measure.

Of those who started birth control pills after their abortion, 4% stopped taking pills, but switched to using an IUD. The remainder reported discontinuing all contraception or using condoms or foam (separately) on an intermittent basis.

FIGURE 6

*Fisher's Exact Test (2-tailed) at 3 mos. p=.5081; at 6 mos. p=.2673; at 9 mos. p=.0474; at 12 mos. p =.0727

TRACKING SUBJECTS WHO STARTED ON BIRTH CONTROL PILLS POST-ABORTION

Experimental versus Control

FIGURE 6

Experimental

58 began at/by 2-week follow-up exam

Pill Originals

3 mos. N=28

Pill 22/28 = 78.5%
None 5/28 = 18.0%
IUD 1/28 = 3.5%

6 mos. N=23

Pill 16/23 = 70%
None 4/23 = 17.3%
IUD 1/23 = 4.3%
Condom 1/23 = 4/3%
Foam 1/23 = 4/3%

9 mos. N=14

Pill 10/14 = 71%
None 3/14 = 22%
Foam or Condom 1/14 = 7%

12 mos. N=13

Pill 4/13 = 31%
None 8/13 = 61%
Abstinence 1/13 = 8%

15 mos. N=9

None 9/9 = 100%

Control

65 began at/by 2-week follow-up exam

Pill Originals

3 mos. N=24

Pill 18/24 = 75%
None 4/24 = 17%
Foam 1/24 = 4%
Abstinence 1/24 = 4%

6 mos. N=17

Pill 8/17 = 47%
None 7/17 = 41%
Abstinence 2/17 = 12%

9 mos. N=17

Pill 5/17 = 29%
None 7/17 = 53%
Abstinence 3/17 = 18%

12 mos. N=12

Pill 2/12 = 17%
None 7/12 = 58%
Abstinence 3/12 = 25%

15 mos. N=10

None 10/10 = 100%

DISCUSSION

Subsequent to the increase in abortion rates in the U.S. after 1973, researchers began to look for ways to prevent repeat abortion.[16,19,20,21,22,23,24,25] The current study is unique on several counts. There have been very few experimentally designed studies testing a counseling intervention.[11,12,14] We know of no study which has tested a multi-session counseling intervention for its impact. In addition, while several workers have examined contraceptive use following abortion,[26,27] classical experimental design is scarce in this literature. Further, no experimental study of which we are aware has been longitudinal. Outcome measures have generally been limited to between two weeks and three months, with rare exceptions.[27] No prospective study has examined the subsequent unintended pregnancy rate. Finally, although the subgroup of low-SES minority women has been identified demographically, experimental research with this specific population is exceedingly scarce.[24]

According to Tietze[23] and others,[28] by no means is all repeat abortion preventable; however, contraception use failure in in this population is an overwhelming national problem. On the basis of several characteristics, our subjects were those at risk for unintended pregnancy and abortion. Unmarried women have an abortion rate four times that of married women. Nonwhites have more than twice the abortion rate of and higher repeat abortion rates than white women.[29] Most of our subjects were unmarried, black women. Most important, however, 97 percent of these patients were Medicaid recipients. Steinhoff found that women with the lowest SES had over twice the probability of having a repeat abortion within 5 years as compared with the highest SES women.[30] In fact, the background paper for a 1984 Alan Guttmacher Institute conference on repeat

abortion concluded that SES is the single greatest predictor of repeat abortion and that women in lower SES groups also have the highest failure rates on each contraceptive method.[31] Although aware that this population is disadvantaged, the researchers nonetheless posited that in-depth peer counseling could empower them to exercise control over their reproductive lives.

Our first hypothesis, that counseling would increase the likelihood of choosing one of the more effective methods, was clearly not demonstrated. Experimental subjects were no more likely to use the more effective methods of pill or IUD than were the controls. Five experimental subjects chose to use a diaphragm, which was significant. Most of our subjects had never seen a diaphragm, and few had even heard of this method. Counseling thus gave the experimentals more options. However, by 9 months, four of the diaphragm users became pregnant, confirming that in this population this method often has low use-effectiveness.

More than half these patients began oral birth control pills after the abortion, whether they were counseled or not. Experimental subjects were no more likely to begin using pills at/by follow-up examination than were the controls.

Nearly three-quarters (71%) of our subjects had been using no method of birth control (including rhythm or withdrawal) when they conceived, and an unusually high pecentage had had (often several) previous abortions. It is interesting to compare our population with that of Berger et al. [25] and Miller et al.[26] who found that approximately half the women seeking abortion report contracepting during the month of conception.

Immediately following our intervention (and the abortion), measured at two weeks post-op, both groups showed an increase in contraceptive use. There was no difference between the counseled and the noncounseled subjects, however. Whether we measure "any from of birth control" or just the most prevalent and effective method (i.e. pills), there was no longitudinal experimental effect. The data reveal that while more than three-fourths of the experimental subjects reported using some form of birth control at first, by a year's time, their compliance level actually fell below that of controls. Of those who began oral contraceptives after their abortion, there was no statistical difference in continued use between the two treatment groups. Moreover, the 15-month checkpoint revealed a precipitous decline to no contraceptive use in both groups. These data should underscore the importance of longitudinal study to experimental effects with this population.

Perhaps the most salient fact to emerge from the data is the seeming inevitability of all our subjects' moving inexorably to using no contraception. This trend is augured at 6 months by comparing our data with Margolis' finding[27] that at six-month follow-up, 91 percent of abortion patients were contracepting. In our sample, only 61 percent of controls and 78 percent of experimentals contacted were using "some method" -- even using a broader criterion than that of Margolis. The impression of a population with a strong resistance to contracepting is born out by the 15-month pill-users, all of whom ceased contracepting, regardless of group.

Conceptually, of course, the objective of our intervention was to have an impact on the repeat abortion rate through longterm contraceptive behavior change. In light of the contraceptive behavior patterns uncovered, it is

perhaps not surprising that the subsequent unplanned pregnancy rate in our study was so high. (By contrast, Steinhoff et al.[30], who investigated 15,075 women in Hawaii by record linkage, found that by one year after their abortion, only 13 percent had become pregnant again -- some of whom may have planned a pregnancy.) It is disappointing that there is no statistically signficant difference in subsequent pregnancy rates between our two groups. The most important factor in the steady rise in the national abortion rate appears to be the rise in the rate of unintended conceptions.[32]

Since there was no significant experimental effect on any measure, we can expect the same reported rates of contraception during the month of conception as the baseline rate (29 percent including rhythm or withdrawal); the same rates of unplanned pregnancy; and the same rate of requests for termination of pregnancy in this population despite the institution of counseling.

We must conclude that, with this specific population, family planning workers have not yet identified an intervention to prevent unplanned pregnancy as a means to lower the high repeat abortion rate. The investigators now question the longstanding assumption that repeat abortion rates could be lowered by "more and better" counseling.

Abortion availability is helping to prevent unwanted births in a population who are repeatedly pregnant without planning. It is apparently used as a method of <u>birth</u> control. Further research is necessary to uncover interventions for this population which would successfully engender greater <u>pregnancy</u> control.

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